In the claims: The claims are as follows.

1. (Currently amended) A method for use in accelerating throughput of segments from a sender (30) to a receiver (40), the sender (30) and receiver (40) each including a protocol layer (30a 40a) for sending and receiving the segments, the method including:

a step (20a) in which the sender protocol layer (30a) transmits segments at a rate of transmission and increases the rate of transmission based on feedback the sender (30) receives from the receiver (40);

the method characterized by:

a step (20b) in which the sender (30) receives a message including one or more bits set to convey an indication of low congestion; and

a step (20c) in which, in response to the indication of low congestion, the sender (30) increases the data transmission rate so as to achieve increased throughput.

2. (Original) The method of claim 1, wherein the sender protocol layer (30a) is a transport layer of transmission control protocol (TCP) and in the step (20a) in which the sender protocol layer (30a) transmits segments at a rate of transmission, the sender protocol layer (30a) starts a congestion window (cwnd) at a size of a starting number (iwnd) of segments and initially increases the congestion window by one segment each time it receives an acknowledgement for a segment it has sent.

3. (Currently amended) The method of claim 2, further wherein in the step (20c) in which the sender (30) increases the data transmission rate, the sender performs an accelerated start in

which the sender sets a slow start threshold (SSTHRES) to a standard initial value ~~(65535)~~ and re-initializes the congestion window (cwnd) value to a new predetermined value to achieve increased throughput, and then grows the congestion window (cwnd) at a predetermined rate in respect to received positive acknowledgments.

4. (Original) The method of claim 1, wherein the protocol layer (30a) is a transport layer of real time control protocol (RTCP) layer or other streaming or datagram protocols.

5. (Original) The method of claim 1, wherein the sender (30) and the receiver (40) communicate over a path that includes a radio access network (RAN).

6. (Original) The method of claim 1, wherein the sender (30) and the receiver (40) communicate over a path that includes a wireless telecommunication system and use EGPRS (enhanced general packet radio service) or GPRS provided by the wireless telecommunication system.

7. (Original) The method of claim 1, wherein the sender (30) and the receiver (40) communicate over a path that includes a UMTS (Universal Mobile Telecommunication System) network.

8. (Original) The method of claim 1, wherein the sender (30) and the receiver (40) communicate over a path that includes a telecommunication network using code division multiple access (CDMA) technology or a variant.

9. (Currently amended) The method of ~~claim 1~~claim 2, wherein in the step (20c) of increasing the data transmission rate, the sender protocol layer (30a) grows the congestion window at the

predetermined rate of one segment for every received positive acknowledgement, but adjusts the rate based on standard congestion principles ~~(RFC2001)~~ in the event of an indication of other than low congestion.

10. (Currently amended) The method of ~~claim 1~~claim 3, wherein the step (20c) in which the sender (30) increases the data transmission rate~~of performing an accelerated start~~ is performed after a connection between the sender (30) and the receiver (40) is first established, and further wherein the congestion window (cwnd) is initially set to a higher value than is used in standard transmission control protocol (TCP).

11. (Original) The method of claim 10, wherein the protocol layer is a transmission control protocol (TCP) layer and the indication of low congestion is based on the value of a bit in a header or is otherwise provided with a received TCP SYN or TCP SYN/ACK sent to the sender (30) by either the receiver (40) or by an intermediate node (50) along the communication path or by a centralized node (60) outside or along the path.

12. (Currently amended) The method of ~~claim 1~~claim 3, wherein the step (20c) of increasing the data transmission rate is performed after transferring to a new path between the sender (30) and the receiver (40) for an existing connection, and further wherein the congestion window (cwnd) for the new path is initially set to the value for the congestion window (cwnd) when the path transfer occurred.

13. (Original) The method of claim 12, wherein the protocol layer is a transmission control protocol (TCP) layer and the indication of low congestion is based on the value of a bit in a header or is otherwise provided with a received TCP ACK sent to the sender

(30) by either the receiver (40) or by an intermediate node (50) along the communication path or by a centralized node (60) outside or along the path.

14. (Currently amended) A telecommunication device (30), including a protocol layer (30a 40a) for sending and receiving segments, the telecommunication device (30) also including:

means (20a) by which the protocol layer (30a) transmits segments at a rate of transmission and increases the rate of transmission based on acknowledgements indicating successful receipt of the segments;

the telecommunication device (30) characterized by:

means (20b) by which the telecommunication device (30) receives a message including one or more bits set to convey an indication of low congestion; and

means (20c) by which, in response to the indication of low congestion, the telecommunication device (30) increases the data transmission rate so as to achieve increased throughput.

15. (Currently amended) The telecommunication device (30) of claim 14, wherein the sender protocol layer (30a) is a transport layer of transmission control protocol (TCP) and the means (20a) by which the sender protocol layer (30a) transmits segments at a rate of transmission includes means (20a) by which the sender protocol layer (30a) starts a congestion window (cwnd) at a size of a starting number (iwnd) of segments and initially increases the congestion window by one segment each time it receives an acknowledgement for a segment it has sent; and wherein the means (20c) by which the sender (30) increases the data transmission rate includes means (20c) by which the sender performs an accelerated start in which the sender sets a slow start threshold

(SSTHRES) to a standard initial value ~~(65535)~~ and re-initializes the congestion window (cwnd) value to a new predetermined value to achieve increased throughput, and then grows the congestion window (cwnd) at a predetermined rate in respect to received positive acknowledgments.

16. (Currently amended) A telecommunication system, comprising a plurality of intermediate nodes (50) and also a plurality of telecommunication devices (30), wherein at least one of the telecommunication devices (30) includes a protocol layer (30a) for sending and receiving segments, the telecommunication device (30) including:

means (20a) by which the protocol layer (30a) transmits segments at a rate of transmission and increases the rate of transmission based on acknowledgements indicating successful receipt of the segments;

the telecommunication device (30) characterized by:

means (20b) by which the ~~based on acknowledgements indicating successful receipt of the segments (30)~~ telecommunications device (30) receives a message including one or more bits set to convey an indication of low congestion; and

means (20c) by which, in response to the indication of low congestion, the telecommunication device (30) increases the data transmission rate so as to achieve increased throughput.

17. (Currently amended) A computer program product comprising: a computer readable storage structure embodying computer program code thereon for execution by a computer processor in a telecommunication device (30) having a protocol layer (30a) for sending and receiving segments, with said computer program code including instructions for performing:

a step (20a) in which the protocol layer (30a) transmits segments at a rate of transmission and increases the rate of transmission based on acknowledgements the sender (30) receives from the receiver (40);

the computer program characterized by including instructions for performing:

a step (20b) in which the telecommunication device (30) receives a message including one or more bits set to convey an indication of low congestion; and

a step (20c) in which, in response to the indication of low congestion, the telecommunication device (30) increases the data transmission rate so as to achieve increased throughput.

18. (Currently amended) A method for use by a telecommunication device (40), the telecommunication device (40) including a protocol layer (40a) for sending and receiving segments to and from another telecommunication device (30), the method characterized by:

a step (10c) in which the telecommunication device (40) performs a process of congestion detection; and

a step (10d) in which the protocol layer (40a) transmits a message including one or more bits set to convey an indication of low congestion to the other telecommunication device (30).